

DIVISION HO - SCIENCE - 4-H  
 DIVISION OO - SCIENCE - OPEN  
 Open Chairperson: Alice Mason & Bonnie Messix  
 4-H Chairperson: Cindy Todd

1. All General Rules and Regulations must be followed.
2. Previously entered exhibits must have a minimum of 5 additional specimens since last exhibit that are well labeled.



**SECTION I - ENTOMOLOGY**  
 4-H Chairperson: Cindy Todd

1. Insects should be mounted according to instructions in the 4-H Entomology Project Guide, 4-H 225. Insects of the same order should be grouped together. Specimens should be mounted on standard insect pins. Each specimen should be labeled to show where and when it was caught and **collectors name**. Labels should not be larger than 1/2" x 1".
2. Collections will be judged on:
  - a) Accuracy in naming and grouping by order.
  - b) Variety of species.
  - c) Neatness in labeling.
  - d) Preservation techniques.
3. In order to re-enter an exhibit, a minimum of 5 new specimens must be added each year. Indicate which are the new specimens by placing a straight pin with colored head next to the specimen.
4. Each collection must be accompanied by 3 x 5 card identifying the number specimens, number of orders and number of new specimens added since previous year.

**Classes:**

1. Insect Collection (Collection of 10 or more insects.) representing at least 3 orders
2. Ecology (Collection.) A collection of insects which are related to each other by habitat such as the insects on one crop, on one plant, in a garden, on an animal, household pests, aquatic insects, gall insects, etc. Identify as specifically as possible. Include a brief explanation of the collection on 3" x 5" card.
3. Insect Life Cycle - exhibit a life cycle of a single insect.
4. Specialty Collection - collection of specimens in special taxonomic group (e.g., family, genus in a single order) Identify specimens as specifically as possible.
5. Educational Exhibit - an exhibit suitable for teaching some aspect of entomology. For example, a collection indicating the various types of metamorphosis (e.g., egg, larva, pupa, and adults of selected insects) or one that shows various types of mimicry (e.g., flies and the bees they mimic, insects with warning coloration, etc.). Include a brief explanation of the collection on a 3" x 5" card.

**SECTION 2 - FORESTRY and TREE IDENTIFICATION**  
 4-H Chairperson: Cindy Todd

In order to re-enter an exhibit, a minimum of 5 new items must be added each year. Indicate which are the new specimens.

**Classes:**

1. Bark Collection (10 or more specimens)
2. Leaf Collection (10 or more specimens)
3. Twig Collection (10 or more specimens)



**SECTION 3 - NATURE COLLECTIONS**  
 4-H Chairperson: Cindy Todd

In order to re-enter an exhibit, a minimum of 5 new items must be added each year. Indicate which are new specimens.

**Classes:**



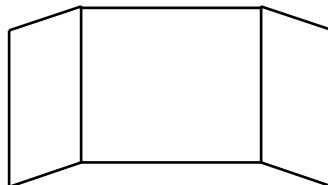
1. Rocks (Collections of 10 or more different samples labeled)
2. Shells or Arrowheads (Collection of 10 or more different labeled samples)
3. Weeds (Collection of 10 or more mounted and labeled weed)
4. Wild Flowers (Collection of 10 or more mounted and labeled flowers)
5. Fossils (Collection of 10 or more labeled samples)
6. Soils (Collection of 10 or more labeled samples)
7. Grass (Collection of 10 or more labeled samples)

**SECTION 4 - OTHER SCIENCE PROJECTS**  
 4-H Chairperson: Cindy Todd

1. Create an educational display for the following projects. The display may not exceed 32" wide x 17" deep x 42" high and must be strong enough to stand alone.
2. Only one display per class may be exhibited.
3. Note: Non-Science Educational displays can be entered in Home & Family Living, Class #48

**Classes:**

1. Forestry Educational Display
2. Wildlife Educational Display
3. Water Quality Educational Display
4. Composting Educational Display
5. Recycling Educational Display
6. Veterinary Science Educational Display
7. Sport Fishing Educational Display
8. Shooting Sports Educational Display
9. Miscellaneous Educational Display  
(A science project that has merit but does not fit in any other category)




10. Used Birdhouse - house must be clean and in a presentable condition. House must have been built, erected and observed by the exhibitor. A record of eggs laid, eggs hatched, birds fledged, number of brood and probable cause of mortality must be included.

**SECTION 5 - ELECTRICITY, SMALL ENGINES and WELDING**  
**Open Chairperson: Alice Mason & Bonnie Messix**  
**4-H Chairperson: Mary Brown**

All General Rules and Regulations must be followed.

**Classes:**

1. Lamp Made From Kit\* (Lampshade not required)
2. Lamp (NOT made from kit)\* (Lampshade not required)
3. Extension Cords or Drop Lights\*
4. Electrical Games, Quizzes, Demonstrations, etc.\*
5. Practical Electrical Appliances\*
6. Electrical Motor or Robotics Educational Display\*
7. Electronics Article\*
8. Small Engines (include card with explanation of how it is used)\*
9. Rebuilt Small Engine Educational Display
-  10. Functional Welding Item - majority of joints must be welded electrically (MIG, SMAW, TIG) or with an oxy-fuel process; welds shall not be ground or filed to improve appearance; may or may not be painted; must be clean.\*





Judged on basis of workmanship, finish, design, strength, usefulness and suitability.

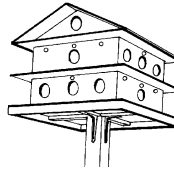
\*All 4-H'ers are encouraged to follow MD State Fair Guidelines, listed below:

1. A wiring diagram and statement of intended use must accompany each article. Enclose diagram and statement of intended use in an envelope listing exhibitor's name, county and class, securely attached with string or tape.
2. Used articles must be in a clean and presentable condition.
3. Articles will be judged on safety (must meet Underwriters Code), workmanship, approved materials, design and performance.

**SECTION 6 - WOODWORKING**  
**Open Chairperson: Alice Mason & Bonnie Messix**  
**4-H Chairperson: Mary Brown**

All projects must be constructed by exhibitor

1. Birdhouse\*
2. Feeder\*
3. Furniture - large outdoor (Any dimension 22" or more)\*
4. Furniture - small outdoor (Largest dimension less than 22")\*
5. Furniture - large indoor\* (Any dimension 22" or more)
6. Furniture - small indoor\* (largest dimension less than 22")
7. Woodwork articles for farm or shop use\*
8. Lathed Turnings\*
9. Chest or storage box - large\* (any dimension 22" or more)
10. Chest or storage box - small\* (largest dimension less than 22")
11. Wooden Toys\*
-  12. Wooden Jewelry Article\*
13. Planter\*
14. Kitchen article - includes cutting board\*
-  15. Refinished article\*
16. Outdoor Article
17. Bookshelf, bookends, rack or keyholder
18. Wooden clock - face, wall, table, mantel or floor\*
19. Other woodwork articles - not included in above classes\*
20. Any Woodworking Project Constructed by Exhibitor - for 1<sup>st</sup> year woodworking members only!



\*All 4-H'ers are encouraged to follow MD State Fair Guidelines listed below.

1. A plan, blueprint, working drawing or sketch used in construction, or refinishing method and a "before" photograph must accompany each article along with a statement of intended use, (bird house plans must state the species of bird house is designed for). Enclose plans in an envelope listing the exhibitor's name, county and class. Attach envelope to exhibit securely with string or tape.
2. Maximum article size not to exceed 3' x 6' x 5'.
3. Articles will be judged on usefulness, design and plan, workmanship, choice of wood, suitability and quality of finish.
4. All articles must be made of worked wood (cut, shaped, sanded, etc.) Kits are only allowed if wood has been worked.

**SECTION 7 - ENERGY 4-H ONLY**  
**Chairperson: Mary Brown**

1. Solar Energy Educational Display
2. Any Other Energy Project

